Emergency stops
Award winning design

Choosing the right emergency stop device is vital in order to increase the safety for your personnel and equipment. ABB has a very wide range of emergency stops which all fulfill the IEC 60947-5-5 standard for emergency stop devices.

Best product award
Our emergency stop series was awarded "Best product" by the well-known magazine P&A, in the category "Ex-shutz & sicherheit" voted by the magazine’s readers.

Modular range
Includes operators, holder, contact blocks, LED blocks and accessories that can be combined with high flexibility.

Compact range
Features an all-in-one design.

Accessories
- Emergency stop shroud
- Enclosures
- Legend plates
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Unique benefits from ABB’s pilot devices

Fast and easy installation
All of ABB’s pilot devices are easy to install. Spring-loaded tabs ensure that actuators and legend plates are kept in their correct positions. Our actuators can be used in both notched and round holes and with the modular snap-on design, we provide one of the fastest assemblies on the market.

L-mark - Customer specific markings made easy
With the L-mark system, custom marking your pilot devices has never been easier, or more fun. In addition to engraving legend plates, we can now laser engrave our entire pilot device offering. With a unique reference number for every marking ordered on the L-mark webpage, reordering is simple and you can be sure to receive the preferred marking every time. Choose from our library of markings or customize your own.

For more information visit:
http://bolservices.it.abb.com/pilot-devices

Long-lasting contact function
With a wiping action, the contact blocks for both the compact and the modular devices are kept clean. While operating, the moving contact rolls over and slides sideways when touching the fixed contact. This ensures a long-lasting and clean contact function also in low-energy applications. With the long service life of our pilot devices, fewer replacements are required and you ultimately save time and money.

Tough and robust according to IP69K
The IP69K certification was initially developed for applications that need regular intensive cleaning (dump trucks, cement mixers, etc.). ABB’s compact pilot devices are certified according to IP69K meaning you do not have to worry about treating them rough. Spray them with water or leave them out in the snow. They will stay reliable and functional.

Waterproof according to IP67
ABB’s pilot devices are perfect for tough environments where a waterproof enclosure is required. Our entire compact line and parts of the modular line are approved according to IP67. The products are protected against the effects of temporary immersion in water, one meter down, for up to 30 minutes.
Modular range
Designed for flexibility and quick assembly

Modular range pilot devices, 22 mm

Pushbuttons
flush and extended buttons, maintained and momentary, illuminated and non-illuminated

Mushroom pushbuttons
Ø 40 mm and Ø 60 mm, momentary, illuminated and non-illuminated

Key operated selector switches
2 and 3 position, several key codes

Pilot lights
with integrated LED blocks, Ba9 sockets for LEDs or filament bulbs

Double pushbuttons
with two flush buttons or with extended lower button, illuminated or non-illuminated

Selector switches
2 and 3 position short and long handle maintained and momentary, illuminated and non-illuminated

Toggle switches
2 and 3 position maintained and momentary

Joysticks
with and without latching function, 2 and 4 position, maintained and spring return

Modular range – The flexible range
- Made for tough environments
- Wiping action secures contact function
- IP66, UL type 1, 3R, 4, 4X, 12 and 13
- Fast and easy installing
- Widest range of integrated LEDs

ABB’s extensive modular range is well-known for its flexibility and robustness. A few high-quality, basic components, can be combined to configure a large number of different devices – all with the same high quality, meeting your exact needs.

In addition to traditional operators like pushbuttons, selector switches, emergency stops and pilot lights, ABB also offers a wide range of special function devices such as machine stops, joysticks, toggle switches, buzzers, definite purpose pushbuttons, potentiometers and reset buttons.
Compact range and additions products
All in one design

Compact range pilot devices, 22 mm

Pushbuttons
flush and extended buttons, momentary and maintained, illuminated and non-illuminated

Selector switches
2 or 3 position, short handle, maintained and momentary

Pilot lights
with integrated LED or Ba9 sockets

Compact mushroom
mushrooms in several colors with heavy duty design

Additional products

Heavy duty pushbuttons
with 30 mm mounting hole

Buzzers
wide range of voltages, both continuous and pulsing sound, illuminated and non-illuminated, different colors

Reset pushbuttons
flush or extended button, with or without shaft

Potentiometers
with or without resistor, 5 ohm, 10 ohm and 50 ohm

Compact range – The competitive alternative to traditional modular series
- Robust all-in-one design
- Wiping action secures contact function
- IP66 and IP67
- IP69K
- UL type 1, 3R, 4, 4X, 12, 13
- Fast mounting
- Pilot lights with integrated LED as an option
- Low built-in depth

The compact range is an “all-in-one” alternative to traditional modular products. Very price competitive, without compromising reliability or quality.

The all-in-one design makes everything easier; all functionality condensed into one single unit means each item has an individual ordering number. This simplifies selection and ordering of the product. The compact range includes pushbuttons, selector switches, emergency stops and pilot lights and has the same front design as our modular range, allowing for combinations between the two.

Segments and applications required IP67 and IP69K rating
- Food processing
- Pharmaceutical
- Petrochemical
- Waste treatment
- Bottling
- Trucking/transportation
- Water/waste water processing
Emergency stops
Award winning design

Emergency stops in modular and compact range

**Modular range - Emergency stops**
Ø 30 mm, Ø 40 mm, Ø 60 mm, twist release, pull release, key release, illuminated and non-illuminated

**Compact range - Emergency stops**
Ø 30 mm and Ø 40 mm, twist release, pull release and key release

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Emergency stops
The emergency stops are designed for tough industrial environments. These robust pieces are approved according to IEC 60947-5-5 and meets protection degree IP66 (C-type IP67 and IP69K) on the front side and IP20 on the terminal side. They are also approved according to UL type 1, 3R, 4, 4X, 12 and 13. This competitive and wide range was awarded the "Best Product" award by the readers of the well-known German magazine P&A.

### Emergency stop test IEC60947-5-5

<table>
<thead>
<tr>
<th>Test</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durability test</td>
<td>6050 cycles. This is not a test of mechanical life. The product has a mechanical life of 100 000 operations.</td>
</tr>
<tr>
<td>Robustness</td>
<td>Test force, 113 N applied in three axes</td>
</tr>
<tr>
<td>Conditioning</td>
<td>Heat and cold, moist, dry and salty atmosphere</td>
</tr>
<tr>
<td>Shock</td>
<td>15 g shock (equivalent to 150 m/s²)</td>
</tr>
<tr>
<td>Vibration</td>
<td>2 h at max. acc. 50 m/s², 10 - 500 Hz</td>
</tr>
<tr>
<td>Opening test</td>
<td>Impulse voltage test at 2 500 V</td>
</tr>
<tr>
<td>Latching test</td>
<td>With 1.6 kg hammer</td>
</tr>
<tr>
<td>Resetting test</td>
<td>Pulling force &lt; 50 N, turning torque &lt; 1 Nm</td>
</tr>
<tr>
<td>Impact test</td>
<td>Three strikes with 1.6 kg hammer</td>
</tr>
<tr>
<td>Electrical tests</td>
<td>Acc. to utilization category AC15 and DC13</td>
</tr>
<tr>
<td>Contacts with positive opening operation</td>
<td>Acc.to annex K § 5.2</td>
</tr>
</tbody>
</table>

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Machine stops
The mushroom machine stops have the same design as the emergency stop, except for the color. The products have passed the same tests but do not, due to the black color, fulfill the requirements for emergency stop pushbuttons. Machine stops are used by customers when a robust and reliable stop is needed but an emergency stop is not required.

**Machine stops - Modular range**
Ø 30 mm and Ø 40 mm, twist release, pull release and key release.

**Machine stops - Compact range**
Ø 30 mm and Ø 40 mm, twist release, pull release and key release.

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Machine stops
The mushroom machine stops have the same design as the emergency stop, except for the color. The products have passed the same tests but do not, due to the black color, fulfill the requirements for emergency stop pushbuttons. Machine stops are used by customers when a robust and reliable stop is needed but an emergency stop is not required.
Other offerings

Signal towers and signal beacons

A solution for every signaling field
The modular 70 mm signal tower system offers a wide range of optical and audible elements in all common voltages. A bayonet mechanism allows the components to be mechanically and electrically connected within seconds. Up to 5 signaling elements can be combined per station and the protection degree is IP54. The vandal proof design of the signal beacons mean they can withstand all mechanical and natural challenges indoors and outdoors. The protection degree is IP65.

Enclosures and stations

Plastic enclosures - Modular range
Up to five base mounted contact blocks/operator, available in yellow and grey

Plastic enclosures - Compact range
1-seat, IP69K, available in yellow and grey

To make both the modular and compact range even more flexible
ABB offers a wide range of accessories such as
- Legend plates and text caps with or without text or symbols
- Protective covers and membranes
- Shrouds
- Bezels
- Widest range of integrated LEDs on the market
- Gold plated contact blocks
- Double contact blocks
- Adaptors for assembly of 22 mm pilot devices in 30 mm diameter holes, available in plastic and metal versions
- Assembly tools and lamp changing tools
- DIN-rail adaptors
- Blanking plugs

Contact blocks/lamp blocks
ABB has the widest range of lamp blocks with integrated LEDs on the market. The micro switch blocks are perfect for low-energy applications such as PLC, and perform down to 3 VDC, 1 mA and with minimal contact bouncing.

Enclosures for modular and compact range

Plastic (1, 2, 3, 4, 6-seat)
- Rear mounted contact blocks (DIN-rail)
- Up to 5 blocks/actuator
- UL type: 1, 3R, 4, 4X, 12 and 13. IP 66

Metallic (1, 2, 3, 4, 6-seat)
- IP 66, 67, 69K
- Aluminium

Compact plastic 1-seat
- UL type: 1, 3R, 4, 4X, 12 and 13. IP 66, 67, 69K
- One of the smallest on the market

Accessories and pilot devices, 30 mm

Wide range of accessories

Wide range with a number of functions with light and sound

Accessories and pilot devices, 30 mm